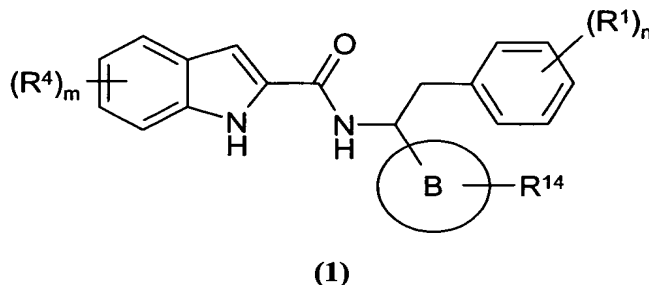


**Claims**

1. A compound of formula (1):

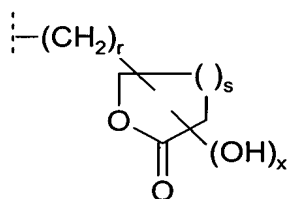


wherein:

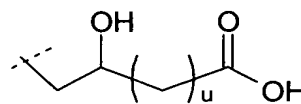
$n$  is 0, 1, or 2;

$m$  is 0, 1, or 2;

$R^1$  is independently selected from hydrogen, halo, nitro, cyano, hydroxy, amino, carboxy, carbamoyl,  $N$ - $C_{1-4}$ alkylcarbamoyl,  $N,N$ -( $C_{1-4}$ alkyl) $_2$ carbamoyl, sulphamoyl,  $N$ - $C_{1-4}$ alkylsulphamoyl,  $N,N$ -( $C_{1-4}$ alkyl) $_2$ sulphamoyl,  $C_{1-4}$ alkyl,  $C_{2-4}$ alkenyl,  $C_{2-4}$ alkynyl,  $C_{1-4}$ alkoxy,  $C_{1-4}$ alkanoyl,  $C_{1-4}$ alkanoyloxy,  $N$ -( $C_{1-4}$ alkyl)amino,  $N,N$ -( $C_{1-4}$ alkyl) $_2$ amino, hydroxy $C_{1-4}$ alkyl, fluoromethyl, difluoromethyl, trifluoromethyl, trifluoromethoxy, and groups of the formula A or A':



**(A)**



**(A')**

wherein  $x$  is 0 or 1,  $r$  is 0, 1, 2, or 3,  $s$  is 1 or 2 and  $u$  is 1 or 2; provided that the hydroxy group is not a substituent on the ring carbon adjacent to the ring oxygen;  
 $R^4$  is independently selected from hydrogen, halo, nitro, cyano, hydroxy, fluoromethyl, difluoromethyl, trifluoromethyl, trifluoromethoxy, carboxy, carbamoyl,  $C_{1-4}$ alkyl,  $C_{2-4}$ alkenyl,  $C_{2-4}$ alkynyl,  $C_{1-4}$ alkoxy, and  $C_{1-4}$ alkanoyl;  
 $B$  is phenyl or heterocyclyl;  
 $R^{14}$  is selected from hydrogen, halo,  $C_{1-4}$ alkyl (optionally substituted with 1 or 2 hydroxy groups),  $C_{5-7}$ cycloalkyl (optionally substituted with 1 or 2 hydroxy groups),  $C_{1-4}$ alkoxy, cyano, cyano( $C_{1-4}$ )alkyl,  $-COR^3$ ,  $(R^2)(R^3)NCO-$ , and  $(R^2)(R^3)NSO_2-$ ;

$R^2$  and  $R^3$  are independently selected from  $C_{5-7}$ cycloalkyl (optionally substituted with 1 or 2 hydroxy groups), cyano( $C_{1-4}$ )alkyl, 5- and 6-membered cyclic acetals and mono- and di-methyl derivatives thereof, tetrahydrothiopyranyl, 1-oxotetrahydrothiopyranyl,

1,1-dioxotetrahydrothiopyranyl, fluoromethylcarbonyl, difluoromethylcarbonyl, trifluoromethylcarbonyl,  $C_{1-4}$ alkyl (optionally substituted with 1 or 2  $R^8$  groups),  $-OR^8$ , and  $R^8$ ;

$R^8$  is independently selected from hydrogen, 2,2-dimethyl-1,3-dioxolan-4-yl, heterocyclyl (optionally substituted on ring carbon or ring nitrogen with 1 or 2 groups selected from hydrogen, nitro, halo, cyano, hydroxy, and  $C_{1-4}$ alkyl), (heterocyclyl) $C_{1-4}$ alkyl (wherein the heterocyclyl is optionally substituted on ring carbon or ring nitrogen with 1 or 2 groups selected from hydrogen, nitro, halo, cyano, hydroxy, and  $C_{1-4}$ alkyl), aryl (optionally substituted with 1 or 2 groups selected from nitro, halo, cyano, hydroxy, and  $C_{1-4}$ alkyl),  $C_{1-4}$ alkyl,  $C_{2-4}$ alkenyl, cyclo( $C_{3-8}$ )alkyl,  $C_{1-4}$ alkoxy, cyano( $C_{1-4}$ )alkyl, amino( $C_{1-4}$ )alkyl (optionally substituted on nitrogen with 1 or 2 groups selected from hydrogen,  $C_{1-4}$ alkyl, hydroxy, hydroxy( $C_{1-4}$ )alkyl, dihydroxy( $C_{1-4}$ )alkyl, aryl and aryl( $C_{1-4}$ )alkyl),  $C_{1-4}$ alkylS(O)<sub>c</sub>( $C_{1-4}$ )alkyl (wherein c is 0, 1 or 2),  $-N(OH)CHO$ ,  $-CH_2CH(CO_2R^9)N(R^9R^{10})$ ,  $-CH_2OR^9$ ,  $(R^9)(R^{10})N-$ ,  $-COOR^9$ ,  $-CH_2COOR^9$ ,  $-CH_2CONR^9R^{10}$ , and  $-(CH_2)_uCH(NR^9R^{10})CO_2R^9$  (wherein u is 1, 2, or 3);

$R^9$  and  $R^{10}$  are independently selected from hydrogen, hydroxy,  $C_{1-4}$ alkyl (optionally substituted with 1 or 2 hydroxy groups),  $C_{5-7}$ cycloalkyl (optionally substituted with 1 or 2 hydroxy groups),  $C_{2-4}$ alkenyl, cyano( $C_{1-4}$ )alkyl, tetrahydrothiopyranyl, 1-oxotetrahydrothiopyranyl, 1,1-dioxotetrahydrothiopyranyl, 2,2-dimethyl-1,3-dioxolan-4-yl, aryl (optionally substituted with 1 or 2 substituents selected from hydrogen, nitro, halo, hydroxy, and  $C_{1-4}$ alkyl), and  $C_{1-4}$ alkyl substituted with  $R^{13}$ ; or  $R^9$  and  $R^{10}$  together with the nitrogen to which they are attached form a 4- to 6-membered ring where the ring is optionally substituted on carbon with 1 or 2 substituents selected from oxo, hydroxy, carboxy, halo, nitro, nitroso, cyano, isocyano, amino, *N*- $C_{1-4}$ alkylamino, *N,N*-( $C_{1-4}$ alkyl)<sub>2</sub>amino, carbonyl,  $C_{1-4}$ alkoxy, heterocyclyl,  $C_{1-4}$ alkanoyl,  $C_{1-4}$ alkylS(O)<sub>f</sub>( $C_{1-4}$ )alkyl (wherein f is 0, 1, or 2),  $-N(OH)CHO$ ,  $(R^{11})(R^{12})NCO-$ ,  $(R^{11})(R^{12})NSO_2-$ ,  $-COCH_2OR^{11}$ , and  $(R^{11})(R^{12})N-$ ;

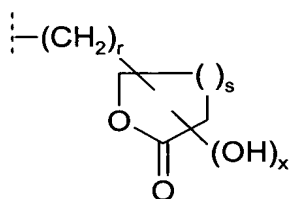
$R^{13}$  is selected from hydroxy,  $C_{1-4}$ alkoxy, heterocyclyl,  $C_{1-4}$ alkanoyl,  $C_{1-4}$ alkylS(O)<sub>d</sub> (wherein d is 0, 1, or 2), -N(OH)CHO, -C(O)N(R<sup>11</sup>)(R<sup>12</sup>), (R<sup>11</sup>)(R<sup>12</sup>)NSO<sub>2</sub>-, -COCH<sub>2</sub>OR<sup>11</sup>, and (R<sup>11</sup>)(R<sup>12</sup>)N-; and

$R^{11}$  and  $R^{12}$  are independently selected from hydrogen,  $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy, hydroxy $C_{1-4}$ alkyl, and  $C_{1-4}$ alkylS(O)<sub>e</sub> (wherein e is 0, 1, or 2); or a pharmaceutically acceptable salt or prodrug thereof.

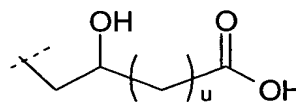
2. A compound of claim 1, wherein

n is 1 or 2;

$R^1$  is independently selected from hydrogen, halo, cyano, nitro, hydroxy, fluoromethyl, difluoromethyl, trifluoromethyl, and groups of the formula A or A':



(A')



(A'')

wherein x is 0 or 1, r is 0, 1, 2, or 3, s is 1 or 2 and u is 1 or 2; provided that the hydroxy group is not a substituent on the ring carbon adjacent to the ring oxygen;

B is heterocyclyl;

$R^{14}$  is selected from is selected from hydrogen,  $C_{1-4}$ alkyl (optionally substituted with 1 or 2 hydroxy groups),  $C_{5-7}$ cycloalkyl (optionally substituted with 1 or 2 hydroxy groups), cyano( $C_{1-4}$ )alkyl, -COR<sup>3</sup>, (R<sup>2</sup>)(R<sup>3</sup>)NCO-, and (R<sup>2</sup>)(R<sup>3</sup>)NSO<sub>2</sub>-;

$R^2$  and  $R^3$  are independently selected from  $C_{1-4}$ alkyl (substituted with 1 or 2 hydroxy groups),  $C_{5-7}$ cycloalkyl (optionally substituted with 1 or 2 hydroxy groups), cyano( $C_{1-4}$ )alkyl, fluoromethylcarbonyl, difluoromethylcarbonyl, trifluoromethylcarbonyl,  $C_{1-4}$ alkyl (substituted with R<sup>8</sup>), -OR<sup>8</sup>, and R<sup>8</sup>;

$R^8$  is independently selected from hydrogen, furyl (optionally substituted on carbon with 1 or 2 nitro groups), thienyl (optionally substituted on carbon with 1 or 2 nitro groups), morpholino, furyl( $C_{1-4}$ )alkyl (wherein furyl is optionally substituted on carbon with 1 or 2 nitro groups), thienyl( $C_{1-4}$ )alkyl (wherein thienyl is optionally substituted on carbon with 1 or 2 nitro groups), 1,2,4-oxadiazolyl, tetrazolyl, imidazolyl, pyrrolidinyl, piperidyl, tetrahydrofuryl, tetrahydropyranyl, tetrahydrothiopyranyl, tetrahydrothienyl, morpholino, pyridyl, phenyl (optionally

substituted with 1 or 2 groups selected from nitro, halo, cyano, hydroxy, and C<sub>1-4</sub>alkyl), pyrazinyl, piperazinyl, 4-methylpiperazino, C<sub>1-4</sub>alkyl, C<sub>2-4</sub>alkenyl, cyclo(C<sub>3-8</sub>)alkyl, C<sub>1-4</sub>alkoxy, cyano(C<sub>1-4</sub>)alkyl, amino(C<sub>1-4</sub>)alkyl (optionally substituted on nitrogen with 1 or 2 groups selected from hydrogen, C<sub>1-4</sub>alkyl, hydroxy, hydroxy(C<sub>1-4</sub>)alkyl, dihydroxy(C<sub>1-4</sub>)alkyl, aryl, and aryl(C<sub>1-4</sub>)alkyl), C<sub>1-4</sub>alkylS(O)<sub>c</sub>(C<sub>1-4</sub>)alkyl (wherein c is 0, 1, or 2), -CH<sub>2</sub>CH(CO<sub>2</sub>R<sup>9</sup>)N(R<sup>9</sup>R<sup>10</sup>), -CH<sub>2</sub>OR<sup>9</sup>, (R<sup>9</sup>)(R<sup>10</sup>)N-, -COOR<sup>9</sup>, -CH<sub>2</sub>COOR<sup>9</sup>, -CH<sub>2</sub>CONR<sup>9</sup>R<sup>10</sup>, and -CH<sub>2</sub>CH<sub>2</sub>CH(NR<sup>9</sup>R<sup>10</sup>)CO<sub>2</sub>R<sup>9</sup>;

R<sup>9</sup> and R<sup>10</sup> are independently selected from hydrogen, C<sub>1-4</sub>alkyl (optionally substituted with 1 or 2 hydroxy groups), C<sub>5-7</sub>cycloalkyl (optionally substituted with 1 or 2 hydroxy groups), C<sub>2-4</sub>alkenyl, cyano(C<sub>1-4</sub>)alkyl, phenyl (optionally substituted with 1 or 2 groups selected from nitro, halo, hydroxy, and cyano), and C<sub>1-4</sub>alkyl substituted with R<sup>13</sup>; or

R<sup>9</sup> and R<sup>10</sup> together with the nitrogen to which they are attached form 4- to 6-membered ring where the ring is optionally substituted on carbon with 1 or 2 substituents selected from oxo, hydroxy, carboxy, halo, nitro, nitroso, cyano, isocyano, amino, *N*-C<sub>1-4</sub>alkylamino, *N,N*-(C<sub>1-4</sub>)<sub>2</sub>alkylamino, carbonyl, C<sub>1-4</sub>alkoxy, heterocyclyl, C<sub>1-4</sub>alkanoyl, and C<sub>1-4</sub>alkylS(O)<sub>f</sub>(C<sub>1-4</sub>)alkyl (wherein f is 0, 1, or 2);

R<sup>13</sup> is selected from C<sub>1-4</sub>alkoxy, furyl (optionally substituted on carbon with 1 or 2 nitro groups), thienyl (optionally substituted on carbon with 1 or 2 nitro groups), morpholino, furyl(C<sub>1-4</sub>)alkyl (wherein furyl is optionally substituted on carbon with 1 or 2 nitro groups), thienyl(C<sub>1-4</sub>)alkyl (wherein thienyl is optionally substituted on carbon with 1 or 2 nitro groups), 1,2,4-oxadiazolyl, tetrazolyl, imidazolyl, pyrrolidinyl, piperidyl, tetrahydrofuryl, tetrahydropyranyl, tetrahydrothiopyranyl, tetrahydrothienyl, phenyl (optionally substituted with 1 or 2 groups selected from nitro, halo, cyano, hydroxy, and C<sub>1-4</sub>alkyl), pyrazinyl, piperazinyl, and C<sub>1-4</sub>alkylS(O)<sub>d</sub>(C<sub>1-4</sub>)alkyl (wherein d is 0, 1, or 2);

m is 1 or 2; and

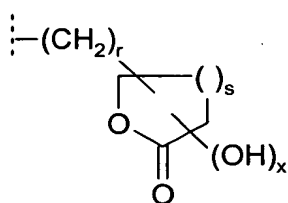
R<sup>4</sup> is hydrogen or halo;

or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof.

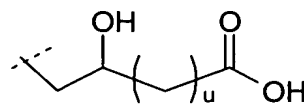
3. A compound of claim 1, wherein:

n is 1 or 2;

R<sup>1</sup> is independently selected from hydrogen, halo, nitro, hydroxy, C<sub>1-4</sub>alkyl, and groups of the formula A or A'



(A')



(A'')

wherein x is 0 or 1, r is 0, 1, 2, or 3, s is 1 or 2 and u is 1 or 2; provided that the hydroxy group is not a substituent on the ring carbon adjacent to the ring oxygen;

B is heterocyclyl;

R<sup>14</sup> is selected from hydrogen, halo, cyano, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>alkyl (optionally substituted with 1 or 2 hydroxy groups, provided that when there are 2 hydroxy groups they are not substituents on the same carbon), and cyanoC<sub>1-4</sub>alkyl;

m is 1; and

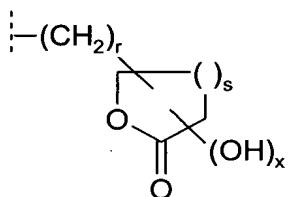
R<sup>4</sup> is chloro;

or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof.

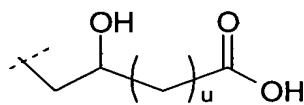
4. A compound of claim 1 wherein:

n is 1 or 2;

R<sup>1</sup> is independently selected from hydrogen, halo, nitro, hydroxy, C<sub>1-4</sub>alkyl, or R<sup>1</sup> is of the formula A or A':



(A')



(A'')

wherein x is 0 or 1, r is 0, 1, 2, or 3, s is 1 or 2 and u is 1 or 2; provided that the hydroxy group is not a substituent on the ring carbon adjacent to the ring oxygen;

B is phenyl;

R<sup>14</sup> is selected from C<sub>1-4</sub>alkyl, cyano(C<sub>1-4</sub>)alkyl, -COR<sup>3</sup>, (R<sup>2</sup>)(R<sup>3</sup>)NCO-, and (R<sup>2</sup>)(R<sup>3</sup>)NSO<sub>2</sub>-;

R<sup>2</sup> and R<sup>3</sup> are independently selected from C<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkyl (substituted with R<sup>8</sup>), -OR<sup>8</sup>, and R<sup>8</sup>;

$R^8$  is independently selected from hydrogen, heterocyclyl (optionally substituted on carbon or nitrogen with 1 or 2 groups selected from nitro, halo, hydroxy, cyano, and  $C_{1-4}$ alkyl), (heterocyclyl)( $C_{1-4}$ )alkyl (optionally substituted on carbon or nitrogen with 1 or 2 groups selected from nitro, halo, hydroxy, cyano, and  $C_{1-4}$ alkyl), aryl (optionally substituted with 1 or 2 groups selected from nitro, halo, cyano, hydroxy, and  $C_{1-4}$ alkyl),  $C_{1-4}$ alkyl,  $C_{2-4}$ alkenyl, cyclo( $C_{3-8}$ )alkyl,  $C_{1-4}$ alkoxy, cyano( $C_{1-4}$ )alkyl, amino( $C_{1-4}$ )alkyl (optionally substituted on nitrogen with 1 or 2 groups selected from hydrogen,  $C_{1-4}$ alkyl, hydroxy, hydroxy( $C_{1-4}$ )alkyl, dihydroxy( $C_{1-4}$ )alkyl, aryl, and aryl( $C_{1-4}$ )alkyl),  $C_{1-4}$ alkylS(O)<sub>c</sub>( $C_{1-4}$ )alkyl (wherein c is 0, 1, or 2),  $-(CH_2)_uCH(CO_2R^9)N(R^9R^{10})$  (wherein u is 0, 1, or 2),  $-CH_2OR^9$ ,  $(R^9)(R^{10})N-$ ,  $-COOR^9$ ,  $-CH_2COOR^9$ ,  $-CH_2CONR^9R^{10}$ , and  $-CH_2CH_2CH(NR^9R^{10})CO_2R^9$ ;

$R^9$  and  $R^{10}$  are independently selected from hydrogen,  $C_{1-4}$ alkyl (optionally substituted with 1 or 2 hydroxy groups),  $C_{5-7}$ cycloalkyl (optionally substituted with 1 or 2 hydroxy groups),  $C_{2-4}$ alkenyl, cyano( $C_{1-4}$ )alkyl, and phenyl (optionally substituted with 1 or 2 groups selected from nitro, halo, hydroxy, and cyano);

m is 1;

$R^4$  is chloro;

or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof.

5. A compound of claim 1 which is:

methyl (*S*)-5-{1-[(5-chloro-1*H*-indol-2-ylcarbonyl)amino]-2-phenylethyl}oxazole-4-carboxylate;

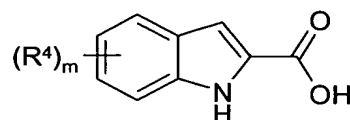
or a pharmaceutically acceptable salt or an in-vivo hydrolysable ester thereof.

6. A pharmaceutical composition which comprises a compound of claim 1, or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof in association with a pharmaceutically acceptable diluent or carrier.

7. A method for the treatment of type 2 diabetes, insulin resistance, syndrome X, hyperinsulinaemia, hyperglucagonaemia, cardiac ischaemia or obesity in a warm-blooded animal, comprising administering a compound of claim 1, or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof.

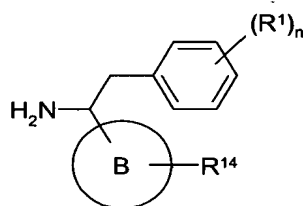
8. A method for the treatment of type 2 diabetes in a warm-blooded animal, comprising administering a compound of claim 1, or a pharmaceutically acceptable salt or in-vivo hydrolysable ester thereof.

9. A process for the preparation of claim 1, which process comprises:  
reacting an acid of the formula (2)



(2)

or an activated derivative thereof; with an amine of formula (3)



(3)

and thereafter if necessary

- i) converting a compound of the formula (1) into another compound of the formula (1);
- ii) removing any protecting groups; or
- iii) forming a pharmaceutically acceptable salt or in-vivo hydrolysable ester.